

**BEFORE THE ILLINOIS COMMERCE COMMISSION  
OF THE STATE OF ILLINOIS**

**Docket No. 03-0596**

**Direct Testimony of Rebecca L. Sparks  
On Behalf of SBC Illinois  
Regarding Dedicated Transport**

**SBC Illinois Exhibit 1.0  
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**DIRECT TESTIMONY OF REBECCA L. SPARKS  
ON BEHALF OF SBC ILLINOIS**

**I. INTRODUCTION**

**A. Witness Qualification and Purpose of Testimony**

**Q1. Please state your name and business address.**

**A1.** Rebecca L. Sparks, 311 South Akard, Room 2104, Dallas 75202.

**Q2. By whom are you employed and in what capacity?**

**A2.** I am the Executive Director-Industry Markets for SBC Operations, Inc. In this position, I represent SBC's Industry Markets group before regulatory bodies and other external stakeholders. The Industry Markets group's primary responsibilities include account and product management functions for access services.

**Q3. What is your telecommunications experience?**

**A3.** I began employment with Southwestern Bell Telephone in 1974 and have over 29 years of experience in the telecommunications industry. From 1974 to 1982, I held a number of positions in SWBT's Kansas operations, including assignments in the business office and sales groups. From 1982 to 1990, I held various staff positions in support of Southwestern Bell's customer care organizations. From 1990 to 1996, I was a product manager for special access products. In this position I was involved in various aspects of state and federal regulation, including tariff filings and FCC proceedings. In 1996, I joined SBC's Wholesale Marketing organization as a wholesale product manager responsible for unbundled network elements ("UNEs") and interconnection. I

participated in decisions relating to the activities of the wholesale marketing/regulatory support group, while coordinating with subject matter experts in other SWBT departments relating to interconnection/regulatory and legal compliance. I have worked on various aspects of SBC's implementation of the Act, including participating in negotiations and arbitration of interconnection agreements with numerous requesting carriers and managing regulatory activities regarding applications under section 271 by SBC operating companies before the Federal Communications Commission. Effective February 1, 2004, I accepted the position of Executive Director-Industry Markets.

**Q4. What is the purpose of your testimony?**

**A4.** I will address SBC Illinois' showing that there is no impairment, and thus no basis for unbundling of local dedicated transport, with respect to the dedicated transport routes identified in Attachments 10 and 13. The FCC's *Triennial Review Order* directs state commissions to assess impairment for certain dedicated transport "routes" of incumbent local exchange carriers such as SBC. The FCC's order establishes three alternative methods to show non-impairment: (1) a "self-provisioning trigger" based on existing transport facilities that competing providers use to serve their own customers; (2) a "wholesale trigger" based on existing facilities that competing providers offer to other carriers; and (3) a "potential deployment" analysis, which considers existing facilities and local engineering factors to determine whether carriers would not be impaired without unbundled access.

46 In this testimony, I address the transport routes along which carriers are not  
47 impaired without unbundled dedicated transport. I demonstrate non-impairment with  
48 respect to DS-3 and dark fiber transport based on the self-provisioning trigger for 127  
49 routes, which are listed on Attachment 10. My testimony also demonstrates non-  
50 impairment with respect to DS-1, DS-3 and dark fiber transport based on the wholesale  
51 trigger for 285 transport routes, which are listed in Attachment 13.

52 In addition, I discuss the potential deployment analysis established by the FCC for  
53 dedicated transport. Although there is a significant amount of competitive deployment of  
54 transport facilities, which is a key factor in the FCC's potential deployment analysis,  
55 SBC Illinois is not seeking a non-impairment determination at this time based on  
56 potential deployment for any routes not already identified under one or both "triggers."  
57 However, in some cases, a carrier or carriers have admitted in discovery that they have  
58 established transport facilities on a route I have included under one or both triggers, but  
59 apparently plan to contend that they are not actively providing transport service to their  
60 own end users or to other carriers. I show below that those carrier arguments are wrong,  
61 but I also show below that at a minimum that those routes satisfy the FCC's potential  
62 deployment analysis.

63  
64 **Q5. How is your testimony organized?**

65 **A5.** First, in Section I.B, I provide background information about dedicated transport and  
66 generally describe the development and extent of competitive transport facilities. Next, I  
67 discuss in Section I.C the pertinent provisions of the FCC's *Triennial Review Order*. In

Section II, I apply the FCC's "triggers" for self-provisioned and wholesale transport (which are based on existing competitive facilities). I then discuss the FCC's analysis of potential deployment in Section III. Overall, I describe the evidence of competitive facilities that I considered, and demonstrate that such evidence demonstrates "non-impairment" for the dedicated transport routes I identify.

**B. Background**

**Q6. What is dedicated transport?**

**A6.** Dedicated transport facilities connect two points within a communications network, so that information can be transmitted between those two points. "Dedicated" transport means all or part of the facility is dedicated to a particular carrier or use and that there is no switching interposed along the transport route.

**Q7. How are transport facilities classified?**

**A7.** Transport facilities are classified by the capacity of traffic they can carry. The basic building block of interoffice transport is the "DS-1" transmission level, which is equivalent to 24 voice-grade circuits (a voice-grade circuit is equivalent to a "DS-0" level circuit). A group of 28 DS-1 circuits (or "channels") forms a DS-3 level channel. DS-3 channels are typically the highest level of electrical signal processing deployed in SBC Illinois' network. To achieve higher capacity and greater efficiencies over longer distances, dedicated transport is generally provided over transmission facilities that use fiber optic cables. Fiber optic transmission systems use components, such as multiplexers and lasers, that are capable of transmitting digital signals as pulses of

lightwave energy at very high transmission speeds. These components are sometimes referred to as “optronics.”<sup>1</sup> Optical fiber transmission systems are often described as “OC-n” facilities, with “OC” standing for “Optical Carrier” and the “n” serving as a placeholder for the applicable transmission level. For example, an OC-3 can carry three DS-3s of traffic (or 2,016 DS-0s), OC-12 can carry 12 DS-3s, OC-48 can carry 48 DS-3s, and OC-192 can carry 192 DS-3s (the equivalent of over 129,000 voice-grade circuits).

Once a fiber optic system is deployed, it can be “channelized” into separate DS-1, DS-3, and higher level channels that operate simultaneously. The amount of total capacity, and the number and capacity of the different channels, can be determined simply by adjusting the optronic equipment connected to the fiber. Optronic equipment is commercially available and provides a tremendous range of transmission speeds and bandwidth options. Such equipment is relatively inexpensive compared to the total cost of constructing fiber optic facilities.

**Q8. How does SBC Illinois use dedicated transport within its own network?**

**A8.** SBC Illinois’ network architecture has traditionally used “central offices” (also known as “end offices” or “wire centers”) which link end users in a given area to the network, and “tandem” offices, which connect central offices. Dedicated transport facilities run between SBC Illinois’ central offices, between central offices and tandem offices, and between tandem offices. Such transport facilities are generally referred to as “interoffice transmission facilities” because they connect two of SBC Illinois’ offices. Attachment 1

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<sup>1</sup> Although various other telecommunications technologies are used by carriers and other entities to provide high speed telecommunications transport (e.g., microwave radio, infrared point-to-point laser, direct satellite



illustrates dedicated transport in SBC Illinois' network. Dedicated transport, as discussed in my testimony, consists of dedicated interoffice transmission facilities that are dedicated to a particular customer or carrier. "Shared" transport, which consists of transmission facilities shared by more than one carrier, is not at issue in this case.

**Q9. What is "dark" fiber?**

**A9.** Dark fiber is deployed fiber optic cable (or fiber strands within an existing fiber optic cable) between two points. It is called "dark" fiber because the cable (or some of the fiber strands in the cable) have not been "lit" by optronic equipment (which transmits information in the form of lightwave pulses, as I described above) on either end of the fiber. Dark fiber *transport* is unlit fiber cable (or strands) between two SBC Illinois central offices. A dark fiber *loop* (which I discuss in separate testimony on high-capacity loops) is unlit fiber between a customer location and an SBC Illinois central office.

**Q10. Have carriers other than SBC Illinois deployed transport facilities?**

**A10.** Yes. Nationwide, competing carriers of all sizes have deployed over 184,000 miles of fiber optic cable. The Association for Local Telecommunications Services ("ALTS"), an industry organization that includes numerous CLECs, estimates that the total is over 339,500 fiber route-miles.<sup>2</sup>

There has been significant growth in competitive fiber over the last 20 years, and in particular since the 1996 Act. The increase in competition in the long distance market

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transmission), my testimony focuses on dedicated transport provided over fiber optics.

<sup>2</sup> *Triennial Review Order*, ¶ 378.

following the 1984 divestiture of AT&T led to the development of several competing fiber networks, and to the expansion of transport facilities between and within those networks. The increase in local competition under the 1996 Act led to the emergence of still more fiber networks, and increased traffic brought about by that competition led to the expansion of existing networks as well. Between 1999 and 2002, the scope of competitive fiber networks almost doubled, increasing from approximately 100,000 route-miles to at least 184,000 route-miles. During that same time period, in the 150 largest MSAs, the number of fiber networks increased from approximately 1,100 to nearly 1,800.<sup>3</sup>

**Q11. Have competing carriers deployed transport facilities in Illinois?**

**A11.** Yes. There has been extensive deployment of fiber optic transport facilities by competing carriers in Illinois, including carriers who “self-provision” fiber transport to carry their own traffic, wholesale providers who offer transport services to other carriers, and carriers who use fiber transport facilities for both self-provisioning and wholesale purposes. Attachment 2 lists the principal competing providers in Illinois. As I will discuss in more detail in sections II and III of this testimony, these carriers have extensively deployed fiber optic facilities, particularly in urban and suburban high-density corridors. They provide a wide range of high capacity, fiber-based transmission services and they serve a variety of customers, including other carriers and “enterprise” business customers.

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<sup>3</sup> UNE Fact Report, III-6 and III-7.

Attachment 3 graphically depicts the extent of fiber transport facilities in Chicago. The red lines represent fiber optic networks deployed by SBC Illinois' competitors. The colored symbols denote SBC Illinois central offices to which competing networks have connected their own transport facilities via "fiber-based collocation" which I describe below. The colored circles denote "carrier hotels" – points outside of SBC Illinois' central offices where competing networks connect with each other, which I describe in more detail below. Clearly, there is already a robust infrastructure in place, with at least 12 competing providers and with competing fiber routes that cover much of the metropolitan area and virtually engulf the downtown Loop.<sup>4</sup>

**Q12. Do the transport facilities of competing providers follow the same physical paths as SBC Illinois' network?**

**A12.** No. Competing carriers generally design their own network routes, although there is a certain amount of overlap between their networks and that of SBC Illinois, especially in dense urban areas. As I discussed above, SBC Illinois' interoffice transport network was originally designed to carry traffic between SBC Illinois' central and tandem offices. On the other hand, competing carriers and wholesale providers have developed their own business plans and have deployed their fiber facilities to meet those needs and to serve their customers. In addition, competing carriers determine their own locations for

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<sup>4</sup> SBC obtained the information used to prepare these maps from two independent third parties, GeoResults and GeoTel, which provide information to assist telecommunications carriers and other buyers and sellers of fiber optic equipment and facilities. These companies are described in more detail in my separate testimony on High-Capacity Loops.

aggregating traffic in a particular area, which are typically called points-of-presence ("POPs"), "hubs" or "gateways."<sup>5</sup>

Thus, competing carriers do not duplicate SBC Illinois' central offices or wire centers, nor do they parallel SBC Illinois' transport routes, nor do they design their own routes entirely around SBC Illinois central offices. For example, OnFiber Communications, Inc. ("OnFiber") has deployed a fiber optic network that centers around its own POPs. Attachment 4 is an excerpt of information provided on OnFiber's public Internet website. OnFiber's maps show that it has deployed fiber facilities in Chicago. Another example is Time Warner Telecom, which offers a "metro-area broadband optical network" connecting its customers "from almost anywhere to almost everywhere." See Attachment 5.

**Q13. How do competing carriers and providers of wholesale transport services connect their transport facilities to SBC Illinois' network?**

**A13.** This can be accomplished in several ways. Many carriers use physical or virtual collocation of their transmission equipment in SBC Illinois' central offices. The carrier uses that transmission equipment to aggregate its traffic from the SBC Illinois central office location for transmission or "backhaul" to its hub or POP over an "entrance facility." The collocating carrier may choose to provide its own entrance facility using a fiber optic cable. For example, the carrier can route its fiber optic cable to the nearest

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<sup>5</sup> The POP usually is the location where the carrier has installed its switch or router. The POP can be at a building owned or leased by the carrier, or at some other location designated by the carrier, such as at a carrier

designated manhole outside SBC Illinois' central office. The fiber cable is then routed through the central office cable vault (which is also where SBC Illinois' own fiber and other cables enter the central office building). SBC Illinois then pulls the CLEC's fiber into the cable vault and routes a fiber cable up to the CLEC's collocation space. A collocation arrangement that is "fed" with a CLEC-provided fiber optic cable as its entrance facility is referred to as a "fiber-based collocation." Attachment 6 illustrates a typical fiber-based collocation arrangement.

**Q14. In addition to bringing its own fiber entrance facility into SBC Illinois' central office, are there other ways for a competing carrier to connect its collocation arrangement to fiber optic transport facilities?**

**A14.** Yes. First, a collocated carrier may obtain the entrance facility from another carrier, such as a wholesale transport provider or "wholesaler." In that situation, the wholesaler routes its fiber to SBC Illinois' manhole to be pulled to the collocating carrier's collocation arrangement. Second, a collocated carrier may interconnect with other collocated carriers in the central office through a "collocation-to-collocation" cross connect. This enables the connected carriers to obtain transport services from each other (*e.g.*, carriers may lease each other's capacity, or make other arrangements such as transport capacity contracts or indefeasible rights of use). Third, a competing provider may connect its facilities via a POP, hub, or "carrier hotel."

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"hotel," which I describe below. Generally, POPs or "hubs" are locations where the carrier can aggregate traffic from several other locations for routing to other locations, or access to backbone facilities, such as an inter-city or

214 **Q15. What is a carrier hotel?**

215 **A15.** A carrier “hotel” is a building where two or more providers have deployed  
216 telecommunications equipment in a location other than the premises of the incumbent  
217 carrier. It is sometimes called a “collocation hotel” or “carrier-neutral” collocation  
218 facility. It allows carriers (as well as other entities like Internet Service Providers and  
219 enterprise customers) to install their telecommunications equipment in a centralized  
220 location, often near a major “central office” of the incumbent. Carrier hotels are designed  
221 to provide a suitable environment for telecommunications equipment (with, for example,  
222 heating and cooling to protect the equipment from extreme temperature and humidity),  
223 access to AC and DC electrical power, and interconnection to fiber optic transmission  
224 equipment and networks. In many cases, a wholesale fiber transport provider offers such  
225 “hotel” arrangements for its clients, including other carriers and/or enterprise customers,  
226 so that they can connect their own networks directly to the transport provider. Carrier  
227 hotels are sometimes located within a carrier’s optical backbone “hub” or “gateway”  
228 locations. Attachment 7 depicts a typical carrier hotel arrangement.

230 **Q16. Are there any “carrier hotels” or comparable arrangements in Illinois?**

231 **A16.** Yes, such facilities are abundant in Illinois. For example, Looking Glass Networks, Inc.  
232 (“Looking Glass”) offers “collocation” services at various metropolitan sites, which it  
233 calls “Looking Glass Node/Collocation Facilities.” Looking Glass offers “carrier neutral  
234 facilities,” “an abundance of power, security and system redundancy,” “[e]asy access to  
235 our high-capacity optical networks and leading edge telecommunications transport

services plus proximity to fiber from multiple carriers.” See Attachment 7. Looking Glass has such facilities in Chicago. *Id.* Another example is Level 3 Communications, Inc. (“Level 3”), which offers “(3) Center <sup>TM</sup> Collocation” in Chicago, among other locations. Level 3 “relies on its collocation buildings to operate its own intercity backbone.” See Attachment 8. An independent market has developed for these facilities, operating a website called “carrierhotels.com.” See Attachment 9.

**Q17. What is the significance of carrier hotels and other alternative collocation facilities?**

**A17.** My analysis of the FCC’s “triggers” in Section II below focuses on competitive transport facilities that are connected to SBC Illinois’ central offices by fiber-based collocation. But as I discussed above, competing providers’ transport facilities do not precisely track SBC Illinois’ network or connect with all of SBC Illinois’ central offices. Thus, by connecting to a carrier hotel, competing carriers can typically gain access to several (or many) other fiber optic transmission networks that connect with that hotel, thereby gaining direct access to those transport networks and indirect access to any SBC Illinois central or tandem offices that are connected to those transport networks. This is illustrated by the diagrams contained on Looking Glass’ website (Attachment 7) and Level 3’s website (Attachment 8). As these diagrams show, it is also possible for large enterprise users, like businesses or Internet Service Providers (ISPs), to be directly connected via fiber optic “loops” to the fiber transport facilities and to carrier hotels. The availability and prevalence of such collocation alternatives are important points to consider in assessing the full scope of facilities-based competition.

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259       **C.     Overview of FCC's Transport Conclusions**

260   **Q18.   How did the FCC define "dedicated transport" in its Triennial Review Order?**

261   **A18.**   The FCC limited its definition of the dedicated transport UNE to "only those  
262       transmission facilities *within* an incumbent LEC's transport network, that is, the  
263       transmission facilities *between* incumbent LEC switches."<sup>6</sup> Note that this definition has  
264       been modified from the one set forth in previous FCC orders, in that it specifically  
265       excludes "entrance facilities" (which, as I described above, are the facilities that connect  
266       the competing carrier's POP to SBC Illinois' central office).<sup>7</sup>

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268   **Q19.   What "impairment" findings did the FCC make with respect to OC-n dedicated**  
269       **transport?**

270   **A19.**   With respect to dedicated OC-n local transport, the FCC found "on a national level that  
271       requesting carriers are not impaired without access to unbundled OCn transport  
272       facilities."<sup>8</sup> The FCC determined that a carrier with sufficient traffic to warrant dedicated  
273       transport at levels of OC-n, by definition, should also have enough revenue along that  
274       route to justify buying or building fiber optic facilities.<sup>9</sup> Accordingly, SBC Illinois is not  
275       required to offer unbundled access to OC-n level transport.

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<sup>6</sup>       *Triennial Review Order*, ¶ 366 (emphasis added).

<sup>7</sup>       *Id.* ¶ 366 n.1116.

<sup>8</sup>       *Id.* ¶ 359.

<sup>9</sup>       *Id.* ¶ 388-89.



**Q20. What “impairment” findings did the FCC make with respect to other categories of dedicated transport?**

**A20.** With respect to dark fiber and DS-3 transport, the FCC stated that “on a national level . . . requesting carriers are impaired without [unbundled] access,” but that finding is “subject to both a granular route-based review by the states to identify available wholesale facilities and to identify where transport facilities can be deployed.”<sup>10</sup> As to DS-3 dedicated transport, the FCC added that unbundling is not required beyond 12 DS-3 transport circuits for a given CLEC on a given route.<sup>11</sup>

With respect to DS-1 dedicated transport, the FCC found “on a national level that requesting carriers are impaired without access to unbundled DS1 transport facilities, subject to a granular route-based review by the states to identify available wholesale facilities.”<sup>12</sup>

**Q21. What reasons did the FCC give for those decisions?**

**A21.** The FCC recognized that “competitive DS1, DS3, and dark fiber transport facilities are available on a wholesale basis in some areas, and that competing carriers have deployed their own transport networks in some areas.”<sup>13</sup> However, the FCC stated that “the record is not sufficiently detailed concerning exactly where these facilities have been deployed,” and that “the nature of transport facilities requires a highly granular impairment

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<sup>10</sup> *Id.* ¶ 359.

<sup>11</sup> *Id.* ¶ 388.

<sup>12</sup> *Id.* ¶ 359.

<sup>13</sup> *Id.* ¶ 360.

analysis.”<sup>14</sup> As a result, the FCC established “specific triggers for states to apply in conducting such an analysis.”<sup>15</sup> It also established criteria for states to assess potential deployment of DS-3 and dark fiber transport based on existing facilities-based competition and local engineering and cost considerations.

**Q22. What is the purpose of the FCC’s analyses?**

**A22.** The FCC stated that its methods are intended to identify “specific point-to-point routes” where (1) “carriers have the ability to use alternatives to the incumbent LEC’s network” or (2) “self-provisioning transport facilities is economic.”<sup>16</sup>

**Q23. What is a specific point-to-point “route” in the context of the FCC’s Rule?**

**A23.** The FCC’s Rule 51.319(e) states that “a ‘route’ is a transmission path between one of an incumbent LEC’s wire centers or switches and another of the incumbent LEC’s wire centers or switches.” A “route between two points (*e.g.*, wire center or switch ‘A’ and wire center or switch ‘Z’) may pass through one or more intermediate wire centers or switches (*e.g.*, wire center or switch ‘X’).” However, the FCC stated that “[t]ransmission paths between identical end points (*e.g.*, wire center or switch “A” and wire center or switch “Z”) are the same ‘route,’ irrespective of whether they pass through the same intermediate wire centers or switches, if any.”<sup>17</sup> In other words, for the purpose of applying the FCC Rule, a competing provider’s transport network need not follow the

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<sup>14</sup>

*Id.*

<sup>15</sup>

*Id.*

<sup>16</sup>

*Id.*

<sup>17</sup>

47 C.F.R. § 51.319(e).

exact same physical path as SBC Illinois' facilities between the two end points, so long as it connects at those same end points.

**Q24. What are the methods for establishing non-impairment for DS-3 and dark fiber transport?**

**A24.** The FCC Rule sets forth three alternative methods to establish non-impairment. The first, which is called the "self-provisioning trigger," is satisfied where three or more competing carriers already provide their own transport along the specified route, if those carriers satisfy certain conditions.<sup>18</sup> The second test, called the "competitive wholesale facilities trigger," is met where two or more wholesale transport providers are willing to provide transport on a generally available basis along the specified route, if those providers satisfy certain conditions.<sup>19</sup> If either trigger is satisfied for a particular route, then the state commission "*shall* find that a requesting telecommunications carrier is not impaired without access to dedicated DS3 [or dark fiber] transport on an unbundled basis" along that route.<sup>20</sup>

These first two triggers address *existing* transport facilities that have already been deployed by competing carriers, and that happen to connect to SBC Illinois' network (*e.g.*, via collocation). The FCC's Rule also establishes criteria for evaluating *potential* deployment.

**Q25. Please briefly describe the potential deployment analysis.**

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<sup>18</sup> *Id.* §§ 51.319(e)(2)(i)(A) and 51.319(e)(3)(i)(A).

<sup>19</sup> *Id.* §§ 51.319(e)(2)(i)(B) and 51.319(e)(3)(i)(B).

337 **A25.** The FCC Rule provides that: “[w]here neither trigger . . . is satisfied, a state commission  
338 shall consider whether other evidence shows that a requesting telecommunications carrier  
339 is not impaired without access to unbundled transport along a particular route” – that is,  
340 where engineering and cost considerations are such that carriers could economically build  
341 or obtain transport facilities along that route.<sup>21</sup> In other words, the FCC recognized that a  
342 requesting carrier could obtain or deploy transport facilities between two central offices,  
343 even where the number of carriers specified by the trigger have not already deployed  
344 fiber facilities into both of the central offices or are not actively using them. For  
345 example, carriers might have already deployed extensive transport facilities within the  
346 SBC Illinois serving wire centers but are not actively using them, or they might have  
347 decided not to establish fiber-based collocation (*e.g.*, the carrier may have established a  
348 collocation arrangement in SBC Illinois’ central office, but decided not to extend its fiber  
349 as an entrance facility to that collocation arrangement). Such fiber facilities may  
350 terminate in carrier hotels, fiber hubs, or POPs. In such cases, the competing carriers  
351 provide transport between SBC Illinois’ wire centers, and indeed between SBC Illinois’  
352 central offices (where they so choose). It’s just that such competing carriers have  
353 established their own alternatives to providing transport along a route.

354  
355 **Q26. What methods did the FCC establish for evaluating impairment with respect to DS-**  
356 **1 dedicated transport?**

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<sup>20</sup> 47 C.F.R. § 319(e)(2)(i) & (e)(3)(i) (emphasis added).

<sup>21</sup> *Id.* §§ 51.319(e)(2)(ii) and 51.319(e)(3)(ii).

A26. For DS-1 dedicated transport, the FCC applied the same “wholesale” trigger discussed above for DS-3 and dark fiber transport.<sup>22</sup> However, the FCC did not define a “self-provisioning” trigger or a “potential deployment” analysis for DS-1 dedicated transport.<sup>23</sup>

**D. Summary of Analysis and Conclusions**

**Q27. How did you go about applying the FCC’s impairment tests?**

A27. I began with the “self-provisioning trigger”, and identified 127 transport routes where at least three non-affiliated competing carriers have deployed their own fiber transport facilities and extended them into SBC Illinois’ central offices. I then applied the “wholesale” trigger for DS-1, DS-3, and dark fiber transport, and determined that at least two providers offer wholesale transport services to competing carriers along 285 transport routes. I describe each of these steps in more detail below.

**Q28. Please explain how you applied the FCC’s self-provisioning trigger.**

A28. As I described above, the self-provisioning trigger looks for instances where competing carriers have deployed *existing* DS3 and dark fiber transport facilities that connect two SBC Illinois central offices to form a dedicated transport “route” (the precise physical paths that the competing facilities take between SBC Illinois’ central offices are irrelevant). Thus, the logical starting point was to identify those SBC Illinois central offices into which competing carriers have extended their fiber transport facilities through collocation. SBC Illinois, of course, keeps records in the ordinary course of

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<sup>22</sup> *Id.* § 51.319(e)(1)(ii).

<sup>23</sup> *Id.* § 51.319(e)(1).

378 business regarding collocation arrangements established by competing carriers in SBC  
379 Illinois' central offices. I also reviewed data that SBC Illinois has received thus far in  
380 discovery.

381 The next step was to look for situations where three or more competing carriers  
382 have deployed such collocation arrangements in a "pair" of SBC Illinois central offices  
383 (e.g., central offices "A" and "Z", which identify the end points of a transport "route").  
384 For example, if a given competing carrier has a fiber-based collocation arrangement in  
385 both central office "A" and central office "Z", it follows that the carrier has transport  
386 facilities connecting A and Z. This is consistent with the FCC's definition of a transport  
387 "route" as *any* connection between central offices A and Z; the precise physical path or  
388 intermediate points between A and Z are irrelevant. I describe each of these steps, and  
389 the results, in more detail in Section II.B below.

390  
391 **Q29. Please explain how you applied the FCC's wholesale provider trigger for DS1, DS3**  
392 **and dark fiber transport.**

393 **A29.** As with the self-provisioning trigger, I looked for competing providers that have  
394 connected to SBC Illinois' switch location at both ends of a "route." Under the wholesale  
395 trigger, though, the number of competing providers required to meet the trigger is only  
396 two (not three as with the self-provisioning trigger). Thus, I again reviewed SBC Illinois'  
397 collocation records and the available discovery responses to identify pairs of central  
398 offices where at least two of the collocated carriers have established transport  
399 connections via fiber-based collocation. Then, I determined whether at least two of those

carriers offer wholesale transport services to other carriers. I reviewed information from various public sources (such as the competing providers' own web sites) to determine which carriers offer wholesale transport services in the applicable markets. In addition, I reviewed information submitted by carriers in discovery regarding their wholesale transport offerings. I describe each of these steps, and the results, in more detail in Section II.C below.

**Q30. Can a competing provider be both a "self-providing" carrier and a wholesale provider?**

**A30.** Yes, competing carriers can and do use their fiber optic networks to carry traffic for their own end users *and* for other carriers. Fiber optic cables have enormous capacity to carry telecommunications traffic. Fiber networks are deployed with one or more cables on a route, and each cable consists of multiple fibers (common quantities are 12, 24, 48, 72, or 92 fibers per cable). In fact, the capacity of the fiber itself is generally not a limiting factor in how much information can flow over the fiber; rather, the transmission speed is primarily determined by the optronics that are connected to the fiber. American Fiber Systems, a wholesale fiber provider, claims that "a single strand of fiber . . . can now carry every phone call, e-mail and web page used by every person in the world." ([www.americanfibersystems.com](http://www.americanfibersystems.com).) In many cases, it simply makes a lot of business sense for a carrier to use some capacity on its fiber network to carry traffic for its own end users, and to lease the remaining capacity to other carriers as a "wholesale" offering. Thus, many competing carriers are actively providing wholesale transport, and offer a

range of specific wholesale options ranging from DS-1 and DS-3 transport, high-speed bandwidth services (OC-3, OC-48 etc), Ethernet-based “gigabit” services, and dark fiber. By “leasing” capacity on their networks, carriers gain additional revenue and increase the efficiency of their networks. The FCC has acknowledged that a carrier may be both a self-providing carrier and a wholesale provider, stating that the self-provisioning trigger is satisfied “when a state commission finds that . . . three competing carriers have self-provided transport facilities on that route (*irrespective of whether they make available wholesale capacity*).<sup>24</sup>

**Q31. Can you provide any examples of wholesale transport carriers that are also “self-providers” in Illinois?**

**A31.** Yes. As I discuss below, there are a number of competing carriers, including Level 3 and XO, that do just that. Attachment 2 summarizes competing providers and shows whether they are self-providers, wholesalers, or both.

**Q32. Please summarize your conclusions.**

**A32.** The data demonstrates that: (i) a large number of competing providers have already deployed extensive transport facilities; (ii) these existing facilities satisfy the FCC’s self-provisioning trigger for at least 127 specific “routes” as listed on Attachment 10; and (iii) the FCC’s wholesale trigger is satisfied for at least 285 routes, as listed in Attachment 13. Most of the routes that satisfy one or both triggers are located in the Chicago area.

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<sup>24</sup> *Triennial Review Order*, ¶¶ 384 n.1184 & 387 n.1200 (emphasis added).  
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444

445 **II. TRIGGER ANALYSES**

446 **A. Overview of FCC Trigger Rules**

447 **Q33. Please review the FCC's "triggers."**

448 **A33.** As I discussed, the FCC's rules contain two "trigger" tests: a "self-provisioning" trigger  
449 and a "wholesale" trigger. The self-provisioning trigger applies to determining non-  
450 impairment as to DS-3 and dark fiber transport. The wholesale trigger applies to  
451 determining non-impairment for DS-1, DS-3, and dark fiber transport.

452

453 **B. Application of Self-Provisioning Trigger**

454 **Q34. Please describe in more detail the "self-provisioning trigger" for unbundled DS-3**  
455 **and dark fiber transport.**

456 **A34.** The "self-provisioning trigger" is satisfied if the Commission finds "that three or more  
457 competing providers not affiliated with each other or the incumbent LEC, including  
458 intermodal providers of service comparable in quality to that of the incumbent LEC"  
459 satisfy two conditions:

460 (a) that each provider "has deployed its own transport facilities and is operationally  
461 ready to use those facilities" to provide dedicated transport along that route; and

462 (b) that the competing provider's facilities terminate either "at a collocation  
463 arrangement" (if the transport route ends at the incumbent's premises) or at "a

similar arrangement” (if the end of the transport route is not located at an incumbent LEC’s premises).<sup>25</sup>

**Q35. Have you examined SBC Illinois’ transport routes to determine if the self-provisioning trigger has been met?**

**A35.** Yes.

**Q36. What have you concluded from your examination?**

**A36.** As shown in my Attachment 10, the self-provisioning trigger has been satisfied along at least 127 routes – the vast majority of which are in the Chicago LATA. While other routes may pass this test, I cannot determine conclusively that they do from the discovery responses to date and from the data possessed by SBC Illinois. It is possible that additional information, possessed by the CLECs but not yet provided in discovery, would reveal additional routes that meet the trigger.

**Q37. How did you apply the FCC’s self-provisioning trigger?**

**A37.** As I discussed above, first, I identified where competing providers have established fiber-based collocation arrangements in SBC Illinois’ central offices. A “route” is defined by its end points – a pair of two central offices (*e.g.*, A and Z). Thus, if at least three (3) competing providers have transport links at both central offices, and if they all satisfy certain other requirements (*e.g.*, the carriers are not affiliated with each other and they have established collocation at each central office end point), then the self-provisioning

<sup>25</sup> 47 C.F.R. § 319(e)(2)(i)(A) & (e)(3)(i)(A).  
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trigger has been satisfied for that route between those central offices and there is no impairment to warrant unbundled access. Attachment 11 depicts a route for which the self-provisioning trigger is satisfied.

Although some collocated carriers lease transport services from SBC Illinois pursuant to state or federal “special access” tariffs, in lieu of extending their own fiber into SBC Illinois central offices, I did not include these arrangements in my analysis.

**Q38. Please illustrate this with an example.**

**A38.** Let’s say that SBC Illinois has four central offices, A, B, C and D. A review of the collocation records shows that three non-affiliated, self-provisioning carriers have established fiber-based collocation at central office A, and that the same three self-provisioning carriers also have fiber-based collocation at central offices B and C. That means that each carrier’s fiber transport network connects to A, B, and C. If those three carriers satisfy the FCC’s other “trigger” criteria (*e.g.*, they are not affiliated with each other), then the self-provisioning trigger would be satisfied for the routes between A and B, A and C, and B and C.

Now let’s look at central office D, and assume that there are less than three fiber-based collocation arrangements there. In that case, the routes involving central office D (*i.e.* routes A-D, B-D, and C-D) would not meet the self-provisioning trigger, because there must be at least three fiber carriers collocated at *both* ends of the route, and in our example end point (D) has less than three such carriers. We would then proceed to the wholesale trigger for those routes, which I discuss further below in subsection C.

**Q39. Please describe the layout of Attachment 10.**

**A39.** Each line of Attachment 10 represents a transport route that satisfies the self-provisioning trigger. The first two columns, labeled "A CLLI" and "Z CLLI," provide the SBC Illinois central offices at each end of the route, identified by the Common Language Location Identifier ("CLLI") code that corresponds to each office: for example, the first route runs between SBC Illinois' central offices BNSVILBV (in Bensenville) and CHCGILCL (in Chicago). The subsequent columns, labeled "Competing Providers," list the self-provisioning carriers that have established fiber-based collocation at both central offices. Any carriers that are affiliated with each other, to the best of SBC Illinois' knowledge, are counted only once on a route -- for example, affiliates MCI and Brooks Fiber are counted only as one carrier and identified generically as "MCI." As the Attachment shows, there are at least three unaffiliated competing providers on each route, and even more than three for some routes.

Attachment 10 also contains a "Confirmed By" column which indicates the type of information by which SBC Illinois has been able to confirm that specific carriers provide service on specific transport routes. For example, Row 12 shows the results for one route in Chicago, between central offices CHCGILCL and CHCGILFR. There are 8 different competing providers that have connected to each office at the end of that route by fiber-based collocation. The "Confirmed By" column indicates that both SBC Illinois' collocation records and discovery submitted by the carriers themselves have confirmed this result. Of the 127 entries in Attachment 10, 103 have been verified by the

530 applicable competing provider in discovery. For the 24 remaining entries, SBC Illinois  
531 has either not yet received any response from the applicable competing provider or the  
532 competing provider has responded but its data response does not say that it has deployed  
533 transport along that particular route.

534 Attachment 12 graphically depicts the Chicago “self-provisioned” routes on a  
535 map. The colored squares denote the SBC Illinois central offices at the end of each route.  
536 The colored lines represent transport facilities connecting those offices. For ease of  
537 illustration, the routes are depicted by straight lines, as the precise physical path is  
538 irrelevant under the FCC Rule.

539  
540 **Q40. Where did you get the information to list the carriers that provide service on a**  
541 **particular route, as shown in Attachment 10?**

542 **A40.** First, I was able to identify the specific carriers that provide transport between two ILEC  
543 wire centers based on review of SBC Illinois’ collocation records. This is the source of  
544 the carrier information for those routes that are marked “collocation records” or  
545 “collocation records and discovery” in the “Confirmed By” column of Attachment 10  
546 (the far right-hand column). I was also able to identify the specific carriers that provide  
547 transport between two ILEC wire centers based on review of the responses to discovery.  
548 This is the source of the carrier information that is displayed in Attachment 10 for those  
549 routes marked “discovery” in the “Confirmed By” column.

**Q41. Did your review of discovery also identify the carriers that provide transport service on the routes marked “collocation records” or “collocation records and discovery” in the “Confirmed By” column of Attachment 10?**

**A41.** Yes, it did. I have a worksheet which shows the names of the specific carriers that provide service on the transport routes marked “collocation records” or “collocation records and discovery” in the “Confirmed By” column of Attachment 10, and SBC Illinois will make the worksheet available to parties in discovery. As I indicate in the “Confirmed By” column of Attachment 10, my conclusion that three or more carriers provide transport service on certain routes is supported by my review of the discovery information.

**Q42. How does SBC Illinois plan to address the locations that have not yet been confirmed by the applicable providers?**

**A42.** For those competing providers that have not yet responded to SBC Illinois’ discovery requests, SBC Illinois is working with those providers to obtain the information. If these efforts are not successful, SBC Illinois intends to either make a motion to compel or enforce its subpoena. For those competing providers that have responded, but have not addressed a particular location where SBC Illinois’ collocation records show they have deployed fiber transport facilities, SBC Illinois intends to issue follow-up data requests and to conduct additional investigation (such as site visits).

**Q43. How do you know that these carriers are “self-providers”?**

573 **A43.** Generally, these carriers' websites contain advertisements regarding the types of  
574 telecommunications services they offer to customers and end users. Additionally, at each  
575 end of the transport route, these carriers have deployed a fiber-based collocation  
576 arrangement in the SBC Illinois central office. To obtain collocation at an SBC Illinois  
577 central office, the competing carrier must either request interconnection with SBC  
578 Illinois' network and/or request unbundled access for the purpose of providing  
579 telecommunications services (as noted above, SBC Illinois did not include collocation  
580 arrangements associated with "special access" service). It follows that any carrier that  
581 has applied for and deployed fiber-based collocation must be a "self-provider" to some  
582 extent. Now, that carrier might also provide wholesale transport service to *other* carriers  
583 *in addition to* using transport facilities to serve its own end users – and in fact, I show  
584 below and on Attachment 2 that several carriers are both self-providers and wholesalers –  
585 but at a minimum it must be a "self-provider." As explained above, and as Attachment  
586 10 shows, SBC Illinois has already received information in discovery sufficient to  
587 confirm that the trigger has been satisfied for 103 routes; for 24 of the remaining routes,  
588 SBC Illinois has received partial confirmation in discovery or is still awaiting  
589 confirmation.

590  
591 **Q44. What data have you relied on to support your self-provisioning trigger analysis?**

592 **A44.** There are two primary sources of information for this portion of the analysis. The first  
593 source is SBC Illinois' own business records. SBC Illinois maintains information  
594 regarding collocation requests and the existence and type of collocation arrangements it

provides to requesting carriers. SBC Illinois compiled a list of fiber-based collocation arrangements, sorted by central office, from its business records, and I used this information to determine which central offices had least three competing carriers connected by fiber-based collocation arrangements. The second source is the discovery responses SBC Illinois has received thus far from the competing providers themselves.

**Q45. How did you determine whether the competitive providers are operationally ready to provide transport at a DS-3 level along each route, in accordance with Rule 51.319(e)(2)(i)(A)(1)?**

**A45.** In support of its petitions seeking pricing flexibility from the FCC for special access services, SBC physically verified all fiber collocation arrangements throughout its 13-state service area (including Illinois) arrangements referenced above in late 2002. SBC Illinois' collocation field managers inspected each arrangement to verify that the collocation arrangement has been completed and the competing provider's fiber entrance facility has been pulled into the collocation arrangement.

Where a carrier has deployed fiber optic transport facilities, it is capable of providing virtually any transmission level – including DS-3. In fact the DS-3 level is one of the building blocks of digital transmission – three DS-3s are combined to form an optical OC-3 – and a fiber cable is capable of carrying several if not many times the capacity of a DS-3. Thus, several of the carriers referenced in Attachment 2 expressly include DS-3 in the transport offerings and capabilities on their websites. See Attachment 2. For example, as advertised on its website, "RCN provides a variety of



SONET transport services, including DS-3, OC-3, OC-12, and OC-48.” Id. Further,  
**BEGIN CONFIDENTIAL \*\*\* \*\*** END CONFIDENTIAL, in responses to SBC  
Illinois Data Request 32, states that in Chicago it “utilizes OC3, OC12, and OC48  
SONET rings to deliver DS1 and DS3 services to both end user and carrier locations.”  
Id. In addition, in its response to Data Request 6, **BEGIN CONFIDENTIAL \*\*\* \*\***  
**END CONFIDENTIAL** indicated that it provides DS1, DS3 and OC-3, 12 & 48 to other  
carriers.

**Q46. Do competing carriers’ fiber transport facilities also contain “dark” fiber?**

**A46.** Yes. It is likely that competing carriers have deployed spare “dark” fibers where they  
have placed fiber optic cables. Dark fiber is fiber optic cable “that has not been activated  
through connections to optronics that light, and thereby render it capable of carrying  
communications.”<sup>26</sup> It simply make engineering sense and economic sense that  
competing carriers’ fiber transport facilities would also contain “dark” fiber because the  
fiber cable itself is relatively inexpensive as compared to the overall cost of deploying a  
fiber-based system along a route. Put another way, it is simply cheaper to put in extra  
fibers to begin with, than to do so later. Thus, where competing carriers have self-  
provisioned “lit” fiber transport, those carriers have most likely deployed at least some  
“dark” fiber along that same route. Several carriers, including **BEGIN**  
**CONFIDENTIAL \*\*\* \*\*** END CONFIDENTIAL confirmed that they provided dark  
fiber to other carriers in discovery.

**Q47. Can the self-provisioning trigger also be satisfied by competitive transport facilities that do not connect to collocation arrangements at SBC Illinois' central offices?**

**A47.** Yes. The FCC Rule states that the self-provisioning trigger can also be satisfied by competitive facilities that terminate *outside* of SBC Illinois' premises, in an arrangement "similar" to collocation.<sup>27</sup> Although some information is publicly available via the carriers' websites, the bulk of the information on such alternative facilities resides with SBC Illinois' competitors, not SBC Illinois. My analysis focused on transport facilities that terminate in collocation arrangements on SBC Illinois premises, because SBC Illinois has access to the information it maintains in the normal course of business regarding such collocation arrangements. For purposes of analyzing the self-provisioning and wholesale triggers, I did not consider "similar" arrangements that terminate outside of SBC Illinois' premises. Thus, my analysis is quite conservative.

**Q48. Based on the above analysis of self-provisioning, what should the Commission decide?**

**A48.** Based on the evidence of self-provisioned transport, the Commission should hold that SBC Illinois is not required to provide DS-3 or dark fiber dedicated transport along the 127 routes listed in Attachment 10.

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<sup>26</sup> *Triennial Review Order*, ¶ 381.

<sup>27</sup> 47 C.F.R. §§ 51.319(e)(1)(ii)(C), (e)(2)(i)(A)(2), (e)(2)(i)(B)(3).

C. Application of Wholesale Trigger

**Q49. Please describe in more detail the “wholesale trigger” for unbundled DS-1, DS-3 and dark fiber transport.**

**A49.** The “competitive wholesale facilities trigger” or “wholesale trigger” for short is satisfied if the state commission finds “that two or more competing providers not affiliated with each other or the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC” each satisfy four conditions:

- they have deployed their own transport facilities (including certain “dark fiber” facilities obtained on an unbundled or leased basis) and are operationally ready to use those facilities;
- they are willing immediately to provide, on a widely available basis, dedicated transport along the route;
- their facilities terminate in a collocation or similar arrangement, as appropriate; and
- requesting carriers may obtain reasonable and nondiscriminatory access to the provider’s facilities through a cross-connect.<sup>28</sup>

**Q50. Which routes has SBC Illinois identified that satisfy the wholesale trigger?**

**A50.** The wholesale trigger has been satisfied for the 285 routes identified in Attachment 13. As with the self-provisioning trigger, the vast majority of these routes are in the Chicago LATA. Attachment 14 graphically depicts the Chicago routes that satisfy the wholesale trigger. As with Attachment 12, the colored squares represent SBC Illinois central offices and the colored lines connecting them represent transport routes.

**Q51. How did you determine that these routes satisfy the wholesale trigger?**

**A51.** I looked at several sources of information. As with the self-provisioning trigger, the first step is to identify which transport routes have carriers with fiber-based collocation at both ends. For the wholesale trigger, though, the number of carriers required is only two, not three. I reviewed SBC Illinois' collocation records and the data received thus far in discovery to determine which pairs of central offices (the "ends" of a transport route) have at least two such carriers. I then determined that those carriers are also wholesale transport service providers.

**Q52. How did you determine whether a collocated carrier was also a provider of wholesale transport services?**

**A52.** I looked at information from the carriers themselves: carriers' websites and press releases describe their wholesale service offerings and the geographic areas in which they offer transport services. In addition, I have reviewed information provided by the competing carriers in discovery to confirm my findings. In some cases, the competing provider itself confirmed that it offers wholesale transport. In others, one of its carrier customers identified that provider as a wholesaler.

The results of these analyses are summarized on Attachment 2. A "yes" under the column labeled "wholesale provider" shows that at least one of the sources listed above identifies the carrier as a wholesale provider. In some cases, this fact was confirmed by several sources.

**Q53. Please describe the layout of Attachment 13.**

**A53.** The layout of Attachment 13 is similar to that of Attachment 10, which listed the routes satisfying the self-provisioning trigger. Each line of Attachment 13 corresponds to a route that satisfies the trigger, and the routes are grouped by metropolitan area. The Attachment provides the CLLI code for the SBC Illinois central office at each end of the route, and then identifies the wholesale carriers on that route.

**Q54. Do any of the routes that satisfy the wholesale trigger also satisfy the self-provisioning trigger?**

**A54.** Yes. In fact, the wholesale trigger is satisfied on all of the 127 routes that satisfied the self-provisioning trigger (and for many additional routes). These 127 routes have at least three self-providers and at least two wholesale providers (as I described earlier, many carriers are both self-providers and wholesale providers). For purposes of DS-3 and dark fiber transport, satisfaction of either trigger is sufficient to show non-impairment so it doesn't matter which trigger is met. For purposes of DS-1 transport, however, only the wholesale trigger can be applied to show non-impairment.

**Q55. Has any carrier stated that it is not a wholesale provider?**

**A55.** Yes. The principal carrier thus far is **BEGIN CONFIDENTIAL**  
\*\*\*\*\* **END**  
**CONFIDENTIAL.**, but claims that it does not offer wholesale service.

**Q56. Do you agree with that response?**

726 **A56.** No. Two competing carriers in response to DR No.2 have already stated that **BEGIN**  
727 **CONFIDENTIAL \*\*\* \*\* END CONFIDENTIAL** provides them transport services.  
728 Because of this discrepancy between carriers' discovery responses, we will continue to  
729 investigate and review additional data responses. But it is important to keep this issue in  
730 perspective. At most, that carrier is saying that it has deployed transport facilities but is  
731 not actively using them today. Even if true, I consider these existing transport facilities  
732 as part of the potential deployment analysis in Section III below, and I show that at a  
733 minimum those routes satisfy the potential deployment analysis. Accordingly, a finding  
734 of non-impairment should be made for these routes, at least for DS-3 and dark fiber  
735 transport.

736  
737  
738 **Q57. How did you verify that the competitive providers are operationally ready to**  
739 **provide transport at dark fiber, DS-1 and DS-3 capacity along each route?**

740 **A57.** Plainly, a carrier would not publicly offer transport services along a route, and go to the  
741 time and expense of establishing and maintaining collocation arrangements at both ends,  
742 if it is not operationally ready to fulfill its offer. And as I described above, the existence  
743 of optical fiber facilities (which even in the most minimal case have capacity equal to at  
744 least 3 DS-3s or 84 DS-1s) certainly allows that carrier to provide either DS-3 or DS-1  
745 transport. Also, carriers can and do offer their unlit fiber on a wholesale basis as dark  
746 fiber.

748 **Q58. Are the wholesale providers collocated in SBC Illinois' central offices?**

749 **A58.** Yes. My analysis looks only at providers that are collocated in SBC Illinois' central  
750 offices, so by definition that requirement of the trigger is satisfied.

751

752 **Q59. How did you determine that the wholesale providers are "willing immediately to**  
753 **provide" dedicated transport "on a widely available basis"?**

754 **A59.** As I noted above, I reviewed the competing providers' own websites to see whether they  
755 advertise their wholesale transport offerings. See Attachment 2. Further, I reviewed the  
756 information provided to SBC Illinois thus far through discovery, in which carriers such as  
757 **BEGIN CONFIDENTIAL \*\*\* \*\* END CONFIDENTIAL** have acknowledged that  
758 they currently provide dedicated transport on a wholesale basis.

759

760 **Q60. How did you verify that requesting carriers may obtain "reasonable and**  
761 **nondiscriminatory access" to the competing provider's facilities through a cross-**  
762 **connect?**

763 **A60.** Where the provider is collocated in SBC Illinois' central office, it can request a  
764 connection to other collocated carriers in that same central office (*i.e.*, a collocator-to-  
765 collocator connection). SBC Illinois makes such connections available by tariff. See  
766 "Interconnection With Other Collocated Carriers," Tariff ILL. CC. No. 20, Part 23,  
767 Section 4, Sheet No. 11. My review indicated that some collocated carriers have already  
768 requested and obtained such connections in Illinois.

769

**Q61. Based on the above analysis, what should the Commission decide?**

**A61.** Based on the evidence of wholesale transport, the Commission should hold that SBC Illinois is not required to provide DS-1, DS-3, or dark fiber transport along the routes listed in Attachment 13.

**D. "Intermodal" Providers**

**Q62. Please define "intermodal provider" in the context of the market for dedicated transport.**

**A62.** In this context, the term essentially describes methods of transporting telecommunications that use technologies and/or network architectures that are different from those in the traditional wireline, circuit-switched telephone network. Basically, in the context of interoffice transport, the traditional technologies have been metallic facilities, microwave radio and fiber optic carrier systems. Some carriers may use other methods, such as wireless technologies or satellite transmission.

**Q63. Does your analysis of competing transport providers include "intermodal providers of service comparable in quality to that of [SBC Illinois]"?**

**A63.** Although carriers have deployed intermodal transport alternatives, SBC Illinois has not yet examined this in detail, due to (i) the scope, complexity, and short timetable of this initial nine-month proceeding, and (ii) the fact that much of the information on intermodal providers resides with those providers, not with SBC Illinois. However, as additional information becomes available SBC Illinois intends to present that information in the subsequent proceedings called for by the *Triennial Review Order*.



793

794 **III. ANALYSIS OF POTENTIAL DEPLOYMENT**

795 **Q64. Please describe the FCC's impairment analysis for dedicated transport along routes**  
796 **where neither the self-provisioning or wholesale trigger are met?**

797 **A64.** For those transport routes where neither the self-provisioning trigger nor the wholesale  
798 trigger are satisfied, the FCC's rules require the state commission to examine "other  
799 evidence" (including actual deployment and certain operational factors) to determine  
800 whether requesting carriers are impaired without access to unbundled transport.<sup>29</sup>

801

802 **Q65. How is evidence of actual deployment relevant?**

803 **A65.** It is relevant for several reasons. One of the best indicators of whether alternative  
804 transport facilities *can* be deployed is by looking at where such facilities have *already*  
805 been deployed. If a competitor has already deployed fiber at or near an SBC Illinois  
806 central office (for example, at a POP or a carrier hotel that is within the same serving  
807 wire center), then that competitor has already examined the pertinent economic and  
808 engineering considerations and determined that it is economically and operationally  
809 feasible to deploy such transport. Further, the closer a competitor's fiber transport  
810 network comes to an SBC Illinois central office today, the less expensive (and more  
811 economic) it is to extend that network to the central office in the future, if it chooses to do  
812 so. FCC Rule 319(e)(2)(ii) recognizes this relationship, and thus requires the state  
813 commission to examine evidence of "existing facilities-based competition." Like the  
814 FCC's trigger tests, this factor looks to evidence of actual deployment in determining

impairment, but unlike those triggers it does not require a set number of competing providers.

**Q66. What does the available evidence of actual deployment suggest with respect to potential deployment?**

**A66.** The real-world evidence of actual deployment provides strong evidence that carriers can deploy, and have deployed, dedicated transport facilities. The maps provided in Attachment 3 show extensive competing transport networks, that culminating in a blanket of fiber transport that literally covers the downtown Chicago area. As I showed in my analysis of the FCC's triggers, over 125 transport routes have three or more fiber-based collocators at both ends, and 285 have two or more such collocations. Depicting these routes on a map (Attachment 14) is sufficient to cover downtown Chicago. Further, there are hundreds of additional routes in Illinois that already have one fiber-based collocator at each end. Moreover, there are numerous other competing providers that publicly offer service throughout Illinois and list Illinois locations as "hubs" within their networks. Several of these carriers have established collocation arrangements in SBC Illinois central offices, although they have not yet extended their fiber into those facilities. As a whole, the evidence demonstrates that carriers have already considered the applicable engineering and cost factors and decided to deploy transport facilities along many routes.

**Q67. How did you approach the analysis of potential deployment for purposes of the present filing?**

837 **A67.** Much of the evidence that is pertinent to the potential deployment analysis is not within  
838 SBC Illinois' control, but rather in the hands of the competing carriers. Given the  
839 accelerated time frame of this proceeding, SBC Illinois is not seeking a determination of  
840 non-impairment based on potential deployment for any transport routes that are not  
841 already covered under one or both triggers. Instead, I will consider the potential  
842 deployment analysis on a highly focused basis, considering only those routes where SBC  
843 Illinois has demonstrated that one or both triggers have been satisfied, and a competing  
844 provider admits that it has facilities on that route but claims that it is not presently  
845 offering service. Even if one takes those claims at face value, this still represents a  
846 textbook case for potential deployment – there has already been *actual* deployment of the  
847 physical facilities, and the costs of deployment have already been incurred. All the  
848 carrier need do is take the last step of turning the facilities up to provide active service.

849  
850 **Q68. How many routes did you consider?**

851 **A68.** In all, I have identified 283 such routes based on discovery responses to date. They  
852 appear in all of the rows on Attachment 13 except rows 265 and 282.

853  
854 **Q69. What factors did you consider in assessing potential deployment on those routes?**

855 **A69.** The first and foremost, as I described above, is “existing facilities-based competition.”  
856 For each route, at least 2 competing providers has already deployed the physical facilities  
857 to connect to both central office “end points” via fiber-based collocation. In addition to  
858 that factor, FCC Rule 319(e)(2)(ii)(B)(2) states that the Commission is to examine:

- a. local engineering costs of building and utilizing transmission facilities;
- b. the cost of underground or aerial laying of fiber or copper; the cost of equipment needed for transmission;
- c. installation and other necessary costs involved in setting up service;
- d. local topography such as hills and rivers;
- e. availability of reasonable access to rights-of-way;
- f. availability/feasibility of similar quality/reliability alternative transmission technologies along the particular route; and
- g. customer density or addressable market;

**Q70. For these routes, what costs of engineering, laying of fiber, and installation would be involved?**

**A70.** Little if any. For these routes, there are already fiber facilities in place at both ends that would be sufficient to satisfy the triggers if it were in active use. Thus, the engineering work has already been done, the fiber has already been laid and then pulled into the carrier's collocation space in SBC Illinois' central office, and installation is complete. At most, all that remains is to add multiplexing equipment to "channelize" the fiber to provide DS-3 service. The FCC has already stated that "attaching routine electronics, such as multiplexers . . . to high-capacity loops is already standard practice in most areas"

and “is easily accomplished.”<sup>30</sup> Further, the FCC has expressly held that the costs of multiplexers and other optronic equipment are not the kind of “sunk costs” that it said could result in impairment.<sup>31</sup>

**Q71. Would local topography prevent the carrier from providing active service?**

**A71.** I can’t see how that could have any impact in these situations. More than one carrier has already laid fiber and pulled it all the way into the SBC Illinois central office. There are no hills and rivers inside a central office.

**Q72. What about rights of way?**

**A72.** Given that the carrier has already deployed the fiber, it has not only obtained any necessary rights of way but used them.

**Q73. Would the availability of alternative technologies be a consideration?**

**A73.** No. By definition, the very limited situation I address here involves traditional fiber optic facilities and fiber-based collocation. Such technology is readily available and in widespread use by carriers. To the extent alternative technologies are *also* available, they would simply bolster the showing of potential deployment.

**Q74. Would customer density constitute a barrier?**

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<sup>30</sup> *Triennial Review Order*, ¶ 634.

<sup>31</sup> *Id.* ¶ 312 n.922.

900 **A74.** No. All of the routes considered here are in the greater Chicago area, one of the most  
901 dense urban areas in the country, with an ample addressable market. Moreover, the fact  
902 that carriers have already deployed facilities on these routes shows that they have  
903 considered customer density and market factors and decided to deploy fiber along the  
904 route.

905

906 **Q75. What do you conclude from your analysis?**

907 **A75.** To the extent any competing providers with transport facilities along the routes addressed  
908 in my trigger analysis contend that they do not actively provide service along their  
909 existing fiber facilities, those routes satisfy at least the potential deployment analysis.

910

911 **IV. CONCLUSION**

912 **Q76. Please summarize the conclusions you have reached.**

913 **A76.** As shown above, SBC Illinois has demonstrated non-impairment with respect to DS-3  
914 and dark fiber transport along the 127 routes identified in Attachment 10, and with  
915 respect to DS-1, DS-3 and dark fiber transport along the 285 routes identified in  
916 Attachment 13 to my testimony.

917

918 **Q77. Does this conclude your testimony?**

919 Yes.